

## Change of Orang Sungai's Subsistence Activities in the Kinabatangan River Basin in Sabah, Malaysia

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### Introduction

Sabah was once the central area for export of tropical timber. Timber logging, increased from the late 1950s, and timber became the largest exporting good to countries such as Japan. Excess logging led to the decrease of forest. Sabah has recently adopted a significant change in its Forest Policy to implement an export regulation on raw timber and decrease timber exports. Palm oil and crude oil are the current main export goods, but forest products such as plywood and sawn timber still play an important role. The Sabah Forestry Department has worked towards sustainable forest management for the remaining forest and has adopted several forest policies such as the implementation of the Forest Certification Scheme from the late 1990s. The Kinabatangan River is the longest river in Sabah, and its basin was once the central area for timber logging.

In the basin of the Kinabatangan River, the indigenous people of Orang Sungai (River People) have long lived by forest product gathering, hunting, shifting cultivation and fishing. The population of Orang Sungai is approximately 40,000, and they are one of the many indigenous groups that live in Sabah. They have received the greatest impact from commercial logging around the Kinabatangan River as they live in wide areas of the river basin.

There have been many studies on forestry or forest policies in Sabah, the forest policy during the colonial period, the royalty system (Tachibana 2000), and socio-economical studies of the logging system and the timber industry. However, there has been no study to show how involvement in the booms and busts of the timber industry has affected the indigenous people, illustrating the topic from the perspective of these people.

The research area is Village W in the basin of Kinabatangan River, Sabah. Research was done through living in the village and interviewing the indigenous people who had been engaged in timber logging and hearing about their life stories and their involvement in the logging industry.

### Overview of the Research Area

#### *1. Location of the Village and the Environmental Background*

Sabah is 73,000 km<sup>2</sup> by area, which is 22.3% of the total area of Malaysia. The population is approximately 2.6 million (Department of Statistics, Sabah 2000). The Kinabatangan River which runs through the northeastern part of Sabah State is the longest river in the state at 560 km by length and 16,800 km<sup>2</sup> by size of the basin area. The upstream area of the river basin is mainly highlands and mountains covered with forest, and the downstream area is flood plain covered with mixed dipterocarp trees. Many wild mammals and birds can be seen in this area, including orangutans, Asian elephants, and proboscis monkeys (Reza Azmi 1996). However, the environment has changed dramatically due to the recent forestry and oil

plantation expansions.

The research area of Village W is located in the midstream of the Kinabatangan River. It is located at the south of Bukit Garam, where the district office of Kinabatangan is located. From Bukit Garam, it is a 30 minutes car drive towards Tawau, turning west into the farm road in the oil palm plantation and driving 60km further. It is now possible to drive directly into the village as the oil palm plantation has been expanded to just south of the village in 2004. The only transportation upstream is by boat, and Village K can be reached by 2 hours by a 30 hp boat.

Village W is located in the downstream section of the Kinabatangan River, so floods are not rare. According to the data from the Forest Department, the annual precipitation of this area is the highest in Sabah at 3,000 to 3,500 mm. The average temperature is 27 degrees Celsius, lowest at 23 and highest at 31. Height above sea level is approximately 200 m. The village is located in the lowlands along the river. As for vegetation, *Shorea leptoclados*, *Dryobalanops lanceolata*, and *Dipterocarpus caudiferus* are the dominant species. This area is rich in biodiversity. Endangered species living in this area are Asia Elephants (*Elephas maximus*) and Tembadau (*Bos javanicus*). Orangutan (*Pongo pygmaeus*) also live in this area, and deer, pigtail monkeys, and hornbills are several more examples of the animals that can be observed (Sabah Forestry Department 2005).

## 2. The Households of Village W

The people of Village W are Orang Sungai, and many of these villagers are Muslims. There is praying in mosques on Fridays, and the Islamic religion has a great impact on the customs of the village. Houses are built along the river and have raised floors for protection against the frequent floods.

The current activities are timber logging, forest product gathering of sawn timber and rattan, hill rice or vegetable cultivation by shifting cultivation, and fishing. In the village are an elementary school, mosque, and an assembly hall.

There are currently 40 households and approximately 250 people in Village W. Each household owns an individual house. Until Second World War, people used to create simple houses and move for shifting cultivation. In this paper, a household is defined as a group of people who live in one house. There is usually one nuclear family per household, but there are cases where a family lives together with a newly married couple or other close relatives. People began to settle down in the current location from the 1940s, and the construction of the elementary school in 1963 accelerated this trend. The number of households reached a peak as timber logging became more popular, and it has been decreasing since. Since 1999, 13 households have moved out of Village W.

Below is the analysis of data gained from 17 households in Village W. The members of Village W are the heads of households, their spouses, and their children. There are only 4 men whose hometowns are not Village W: Mr. H, age 74, from Paitan, Mr. J and Mr. JM, age 68 and 64, originally from Lemag (current Bukit Garam), and Mr. K, age 24, from Bukit Garam. The oldest 3 came to the village for timber logging and married the women from the village. Mr. K, age 24, is still single and came to the village after his sister married a man from Village W. He has a job in Village W.

The women whose hometown are not Village W moved to the village through a marriage with a man

from the village: Ms. A, age 41, from Village A, Ms. B, age 3, from Tawau, Ms. C, age 30, from Bukit Garam, and Ms. D, age 26. More women than men have moved to Village W. Although there are some who are new to the village, the majority of the villagers are originally from the village.

### ***3. The Subsistence Activities of the Villagers and their Working Status***

Table 1 shows the working status of the villagers. Villagers are involved in various activities such as shifting cultivation, vegetable cultivation, fishing, and forest product collection. Therefore, these activities have been listed as Kerja Kampung (Work in village). The only public facility in Village W is the elementary school. The only activities which receive a Kerja Tamat (fixed income) are teachers at the elementary school, security guards at the elementary school, and village leaders such as Ketua Kampung and JKKK.

Information about Kerja Kampung was collected from observations and interviews in the village. For agriculture, hill rice cultivation is the main activity, but in 2006, only 2 households planted in that year. Some of the reasons mentioned by the villagers were the flood which occurred earlier that year after 6 years of no flood, the unsettled weather, or the sickness of a family member. On the other hand, many households planted their seeds in 2007. They originally planted 3 times a year, in March, July, and October. It changed to twice a year, in March and July. It has recently become only once a year in July and harvest in October. The crops are sweet rice, non-glutinous rice, red-kerneled rice, and black-kerneled rice. Over 5 types of rice were mentioned in the interviews.

Other households purchase rice from stores. It can be purchased at general stores in the village, but most households purchase at stores in Bukit Garam or Sandakan for more reasonable prices.

Vegetables and root vegetables are usually grown in small private farms around each house. They usually cultivate for 1 to 2 years, and when the soil is no longer fertile, they find a different place, log, burn, and plant again. Some vegetables that can be harvested throughout the year are cassavas, Sayur Manis, eggplants, pumpkins, and sweet potatoes. Some vegetables that are planted twice a year are Sawi, corn, okra, and Kacang Panjang. They feed their families and sell the rest. They sell in the village, or sometimes go to the estate or to Bukit Garam.

In Village W, plantation of rattan and fast growing species are popular. They are currently waiting for the next opportunity to harvest.

Fishing is done within the territory of the village for feeding families and selling. There are various methods, such as using fishing nets and fishing poles, but chemical poisoning and the use of electricity are prohibited. Prices of fish are strictly regulated by the village. The distance to the town is the issue for selling outside the village.

### ***4. Education***

Table 2 shows the current status of schooling children and educational background of graduates in the village. A kindergarten is run by an NGO based in Sabah that supports voluntary social development of the local people. It is each parent's decision to send a child to kindergarten for it is not compulsory education. Before the establishment of the elementary school in 1963, villagers went to the downstream village of Pintasan or Lemag (current Bukit Garam, the center of the district) for education, and many villagers did not

have this chance. The elementary school was constructed as a result of the demand from the villagers. Junior high school is only available in Bukit Garam, which is 1.5 hours downstream from the village. One has to stay in a dormitory or a relative's house to attend the junior high school. As shown in the figure, many of the graduates are only elementary school graduates, unable to attend junior high school.

Until the 1980s, villagers had to go to Sandakan for high school, but now it is available in Bukit Garam. Even after graduating from high school, many people stay in the village. Connections are said to be more important than educational background in finding a job in the village. Because of financial reasons, only a few have the chance to go to university. It is becoming more difficult to find a job in the village, and at the same time, jobs in town require a certain degree of educational background.

## Indigenous People in Forest Use and Commercial Logging

The people of Orang Sungai who live along the Kinabatangan River have experienced the booms and busts of large-scaled commercial logging since the 1950s. In order to illustrate the involvement of the people in Village W in forest use, interviews were carried out to research past subsistence activities and the life stories.

### *1. Subsistence Activities before Commercial Logging*

The basin of the Kinabatangan River was famous during the Sulu Period for non-forest products such as aloewood, ivory, hornbill beaks, and bird nests. Until the 1940s, the people were involved in forest product gathering, especially damar (resin) and rattan gathering, shifting cultivation, and fishing.

Before being involved in commercial logging, many villagers were involved in forest product gathering. They had collected damar regularly from trees in the forest such as Kapur (*Dryobalanops* spp.). Damar was sold to stores of Chinese brokers in Sandakan. As for rattan, there were several types, an example of which was Rotan sega (*Calamus caesius*).

In shifting cultivation, hill rice was harvested about 2 to 3 times a year. When there was a shortage of rice harvest, the village moved to other land for shifting cultivation. People cultivated sweet potatoes and cassavas around their houses. Houses were built with bamboo and palms, and were easy to build again.

### *2. Subsistence Activities during Commercial Logging Period*

Until the early 1960s, timber logging was done around Sandakan, but in the late 1960s, it expanded to the downstream of the Kinabatangan River as well as to Lahat Datu (Tachibana 2000). The reasons were that land along the Kinabatangan River was relatively flat, and that rivers were used to carry timber. In the 1970s, the area also expanded into the inland, and in the 1980s, the center of timber logging shifted to the upstream of the Kinabatangan River, which was the area with the richest resources. Logging of secondary forest also began, which was mainly in the coastal areas.

It was after the Second World War when large-scaled timber logging began in the basin of the Kinabatangan River. It was in the downstream area of the river where logging first took place.

In the early 1950s, the British Borneo Timber Company acquired the logging concession in the downstream area of Seguliud-Lokan and began to operate. Logging had long been a monopoly of this

company, ever since the colonial period. Saws and axes were used for logging, and timber was carried by Kuda Kuda (a large sleigh for carrying logs), and by railways and tramways.

The news of the beginning of the logging in Seguliud-Lokan soon spread to Village W, and many single men from Village W went out of the village to seek job opportunities. The people traveled down the river in a small rowing boat. The jobs given to the villagers were very simple, such as transporting logs, peeling tree bark, or tying up the logs.

According to Mr. U, age 74, who used to be a Kuda Kuda puller, one Kuda was pulled by a group of 8 men. He pulled from 3 to 5 logs in a day. Pay was in accordance with the pulled distance, and this pay was split amongst the members of the group. The more they pulled, the more pay they received.

Long term logging concessions were only allowed to a few companies, but in the 1960s, they were also given to timber companies run by overseas Chinese owners. A company run by an overseas Chinese owner, gained the long term logging concession in the Forest Reserve nearby Village W, and large scale logging was operated from 1956 to 1977.

As new logging camps opened very close to the village, many villagers became engaged in logging, and this gave a tremendous impact on the subsistence activities in the village. The people who had been working in downstream areas also came back to the village to work in the newly opened logging camp.

Kuda Kuda, railways and tramways were used when logging camps first opened, but the work of logging eventually became automated. In mid 1970's, logging companies began using chain saws and tractors for logging, and soon the villagers became involved in such machinery work.

There were also many villagers involved in transporting timber from logging camps to log ponds in Sandakan, being hired by the timber companies. They worked as a captain or as crew of the timber transporting ships. Depending on the water level, one round trip took about 1 to 2 weeks, and depending on the amount of the timber, they took about 1 to 3 trips per month. One boat had a captain, an engineer, and a sailor.

Timber logging decreased in the 1980s as the number of trees decreased. After the 1980s, timber companies operated relatively small scale timber logging.

In the 1990s, the scarcity of resources and the prohibition of log exports by the government led to the closure of many logging camps around the village. As a result, many people moved or began working at the Forestry industry as logging camps moved to the upstream of the Kinabatangan River.

### ***3. Current Subsistence Activities***

The exit of the logging companies from Village W had a substantial impact on the subsistence activities of the indigenous people. They can no longer sell fish or vegetables to the logging camps. The opening of the oil palm plantations also had a substantial impact. The oil palm plantations expanded at the south of the village. Some villagers opened small oil plantations, and some villagers are working at oil plantations. The work is relatively tough for the amount of pay, and many have quit.

Other sources of income are scrap metal and rattan collection, fishing, shifting cultivation, but there is a limit to the number of activities. Metal scrap gathering involves searching for and digging up the scrap parts of abandoned tractors from the old logging camps. Scrap was sold to a tauke, and more people began to be

involved in this activity from 2004 onwards. The tauke then transported the scrap to Sandakan and sold it to metal factories.

The decrease of wage labor in logging industry led to a significant decrease in the job opportunities in the village. More and more households have moved to the downstream of the Kinabatangan River such as Bukit Garam or Sandakan, where county public offices are located.

## Conclusion

Orang Sungai people had long been involved in shifting cultivation, fishing, and forest product gathering in the basin of the Kinabatangan River in Sabah. When commercial logging began and many logging camps were opened around the village, many villagers became involved directly as logging workers. Villagers also received indirect financial benefits such as by selling vegetables or fish to these logging camps.

The booms and the busts of commercial logging had a significant impact on the subsistence activities of the villagers. The current subsistence activities of the villagers are shifting cultivation or fishing as before, logging of timber from trees that are currently scarce, plantation of rubber trees or oil palms, or seeking new job opportunities in the cities. They are still searching for new subsistence activities in place of timber logging.

## References

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**Table 1:** The Subsistence Activities of Villagers and Working Status

Job Type	W village		Outside		Total
	F	M	F	M	
Kerja Kampung	22	29			51
House work			5		5
Oilpalm farming			3	1	4
Imam		2			2
School Safeguard		2		1	3
Kindergarten Teacher	2				2
Village Leader		1			1
JKKK		1			1
Police Officer			1		1
Elementary School Teacher				1	1
Secretary for Political				1	1
Nurse			1		1
Tourist Guide				1	1
Hotel Cook				1	1
Furniture Sales				2	2
Cars Sales			1		1
Selling Staff at Retail				1	1
Oil Palm Plantation				3	3
Office Worker			1		1
Weed Cutting				1	1
Others	1	1			2
Unknown				1	1
Total	25	36	12	14	87

Source: Household Survey by the Author

**Table 2:** Current Status of Schooling Children and Educational Background of Graduates in the Village

Current Students				Graduates			
	Female	Male	Total	No	Female	Male	Total
Tadika	3	2	5	No	12	5	17
SR1	2	2	4	SR1	0	0	0
SR2	2	0	2	SR2	0	0	0
SR3	2	1	3	SR3	0	0	0
SR4	1	2	3	SR4	0	0	0
SR5	2	1	3	SR5	0	1	1
SR6	0	0	0	SR6	11	12	23
SM1	1	0	1	SM1	2	4	6
SM2	1	1	2	SM2	0	2	2
SM3	1	1	2	SM3	3	13	16
SM4	1	1	2	SM4	0	0	0
SM5	1	1	2	SM5	10	12	22
SM6B	0	0	0	SM6B	0	0	0
SM6A	1	0	1	SM6A	0	0	0
U	0	0	0	U	0	0	0
Total	18	12	30	Total	38	49	87

No: No Schooling, SR: Elementary School, SM: Junior High and High School, U: University. Source: Household Survey by the Author